76. (New) The population of AC133 positive cells according to claim 75, wherein said selecting with said fluorochrome conjugated antibody is by flow cytometry.

77. (New) The population of AC133 positive cells according to claim 71, wherein said antibody is conjugated to magnetic particles.

A5 Cont'd

78. (New) The population of AC133 positive cells according to claim 77, wherein said selecting with said magnetic particle conjugated antibody is by high gradient magnetic selection.

79. (New) The population of AC133 positive cells according to claim 71, wherein said mixed population of cells is derived from bone marrow, fetal bone marrow, liver, umbilical cord, blood, or cytokine mobilized blood.

REMARKS

Claims 1-12, 28-34 and 39-40 have been cancelled as these claims, or ones similar to them, have been issued or are being prosecuted in parent cases. Claims 35 and and 36 have been amended to the independent form by including the limitations in the cancelled base claim, claim 28, from which they previously depended. Claims 26, 27 and 48 have been amended to correct errors in antecedent basis. New claims 52-79 have been added to methods of selecting a population of AC133 positive cells using an antibody specific for AC133 antigen, to methods of identifying cells that express AC133 antigen and to a population of AC133 positive cells. These new claims are supported in the specification at page 5, line 24 through page 6, line 1, page 6, lines 18-25, page 16, lines 16-17 and page 38, lines 20-24, *inter alia*. No new matter is added by these amendments.

If in the opinion of the Examiner, a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned at (650) 843-5000.

The Commissioner is hereby authorized to charge any underpayment of the following fees associated with this communication, or credit any overpayment to Deposit Account No. 03-3117:

[X] Any national application filing fees under 37 CFR 1.16.

[X] Any patent application processing fees under 37 CFR 1.17.

Cooley Godward LLP
Attn: Patent Group
Five Palo Alto Square
3000 El Camino Real
Palo Alto, CA 94306-2155
Tel: (650) 843-5000
Fax: (650) 857-0663
ML\hh

Respectfully submitted,
COOLEY GODWARD LLP

By: 

Marcella Lillis, Ph.D.
Reg. No. 36,583

Marked up version of amended claims showing changes.

26. (Amended) An expression vector comprising [a] the nucleic acid [sequence] molecule of claim 21.

27. (Amended) A cell transfected with the [molecule] vector of claim 26.

35. (Amended) A method for identifying a ligand that binds to human hematopoetic stem cells, comprising detecting binding of said ligand with [the] an isolated polypeptide [of claim 8,] wherein said polypeptide comprises: (1) a first amino acid sequence of AC133 as set forth in SEQ ID NO: 2; (2) a second amino acid sequence wherein said second sequence is a subsequence of said first sequences and is at least 6 amino acids in length; or (3) a third sequence in which at least one amino acid of said first or second sequences is replaced by a different amino acid, with the proviso that said amino acid replacement is a replacement of one acidic residue for another, one basic residue for another, one non-polar residue for another, one uncharged polar residue for another, or one aromatic residue for another, with the proviso that said third sequence is at least 90% identical to said first or second sequence

36. (Amended) A reagent that specifically binds to [the] an isolated polypeptide [of claim 28] wherein said polypeptide comprises: (1) a first amino acid sequence of AC133 as set forth in SEQ ID NO: 2; (2) a second amino acid sequence wherein said second sequence is a subsequence of said first sequences and is at least 6 amino acids in length; or (3) a third sequence in which at least one amino acid of said first or second sequences is replaced by a different amino acid, with the proviso that said amino acid replacement is a replacement of one acidic residue for another, one basic residue for another, one non-polar residue for another, one uncharged polar residue for another, or one aromatic residue for another, with the proviso that said third sequence is at least 90% identical to said first or second sequence.

48. (Amended) A ligand for AC133 identified by the method of claim [36] 35.